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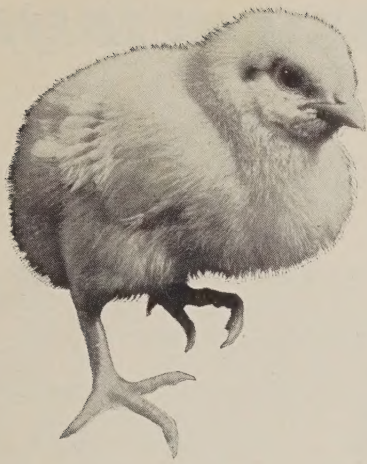
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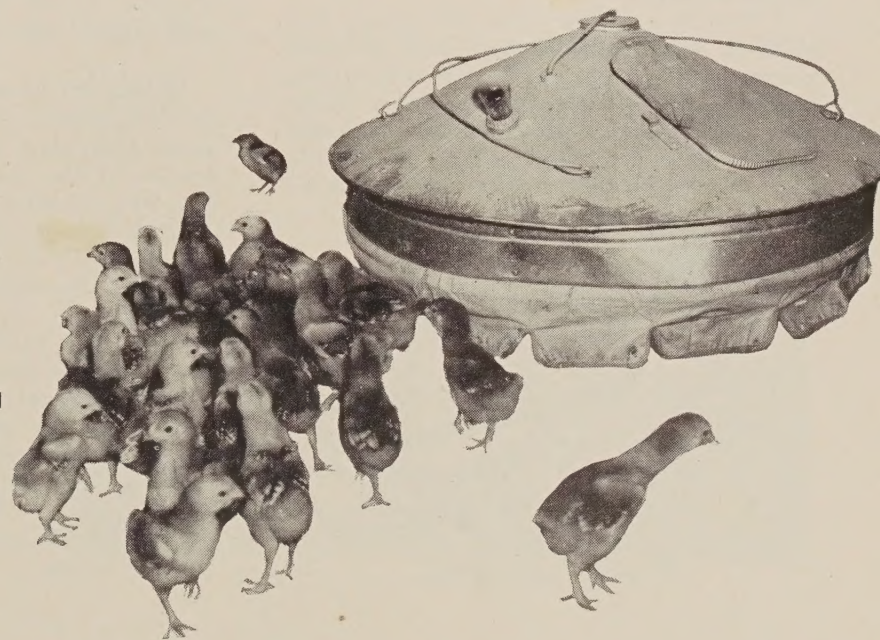


MORE POWER TO YOUR POULTRY RAISING

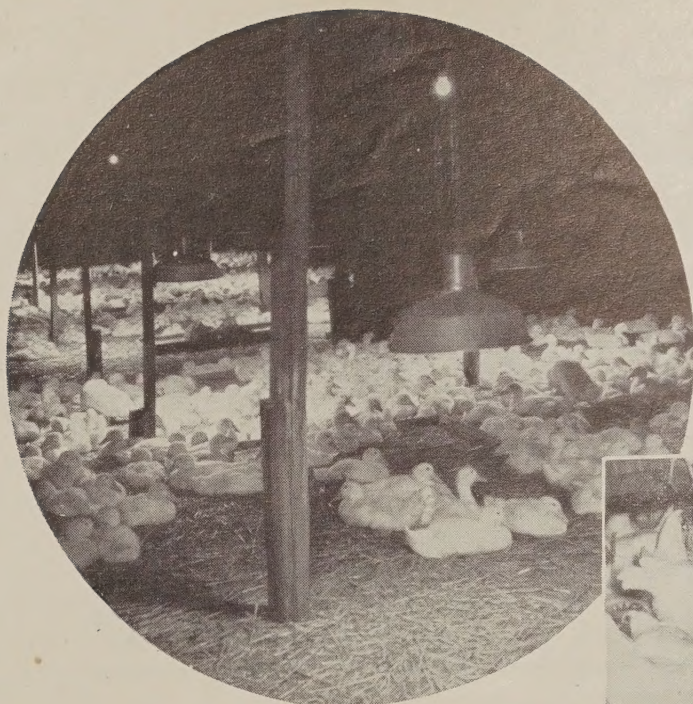
USING electricity as a helper in your poultry operations steps up general efficiency . . . saves many hours of labor, helps produce eggs and birds at times when production is most profitable.

As more and more farmers prepare to apply this modern servant to poultry and egg farming, they want to know, "What equipment shall I get? What can it do to save me time and step up my profits?" These pages tell briefly about modern electrical devices and their importance to you as a poultry producer.

**Power brings: Better methods
. . . Timely production . . .
Better quality . . . Less labor**



POULTRY EQUIPMENT



Lights. In the fall, when feed supplies are plentiful, electric lights in your hen-house will enable you to get eggs out of your pullets when eggs are in demand; then you can sell the birds when the feed supply is low the following spring.

Lights can be used at either end of the day, or at both ends, extending the day to 12 or 14 hours. Lamps of 40-watt capacity can generally be used. An automatic time switch to turn the lights on and off is very convenient. After the 40-watt lights are turned off in the evening, dim lamps of 10-watt capacity should be turned on on another circuit, to enable the hens to get to the roosts.

A 20-watt lamp can be used for all-night lighting, if desired, with only a manual switch required.

A 40-watt lamp for every 200 square feet of floor space, placed over feed or water receptacles, is usually sufficient to keep the birds eating and drinking enough to maintain production in fall and winter months. Lights also discourage human and other marauders, and tend to increase growth of

fall-brooded young chickens. Ultra-violet lights aid growth, production, and health by supplying vitamin D. Such lighting does not replace the use of fish oils in the standard ration.



More water, more production.

NOTE.—It is important to build up use of lights gradually, increasing length of use by 15 or 30 minutes daily at start of season.

Two lights in a poultry house of the common 400-square foot size use from 2 to 3 kw.-hr. of power per week, depending upon size of lamps used and length of use.

Water Supply. The body of a bird is about 55 percent water and eggs are 65 percent water, so a plentiful supply is absolutely essential to a poultry program.

Carrying water to poultry by hand is one of the arduous tasks

on the farm. It is unnecessary with a steady flow of water to your flocks, made possible by one or more faucets in the poultry house or in the yard, or by an automatic watering device.

A poultry waterer of the fountain type may be made automatic by a float control and direct connections by pipe to your water system. Lacking automatic control, the farmer can connect a hose from the faucet to the waterer. Both eliminate frequent watering by pail or bucket.

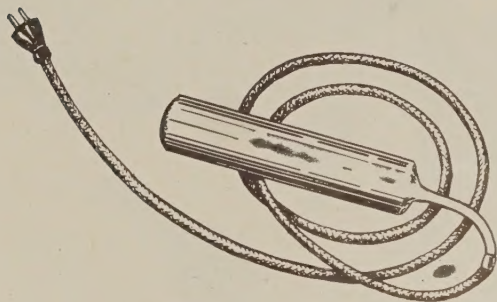
Pumping of water needed for a flock of 500 chickens uses less than one kw.-hr. of power per week. The exact amount of power will depend upon type of pump and depth of well.

Water Warmer. Water warmed to 40 or 50 degrees Fahrenheit in cold weather encourages poultry to drink from 20 to 40 percent more than they would if the water were at freezing point. Of course, if the water actually freezes, the hens don't drink any. Electric warming can be done either with an immersion heater placed directly in the water, or by heat under the waterer.

Immersion heaters are usually of the cartridge type, of about 200-watt capacity, although smaller sizes can be obtained for small receptacles.

Indirect heaters are of several types. The most common is a ring on which the base of the waterer is set.

Electric insulation is important in all types of water warmers because of the proximity of electric current to water. Thermostatic control, with which many heaters are supplied, assures warm water at low cost. This is particularly important where weather is changeable. With automatic control of both heat and flow of water, electricity is a reliable agent for constant supply of warmed poultry water.



Immersion water heater.

OR MODERN METHODS



Simple fan installation does the job.

Water warmers use varying amounts of electric current, depending on size, type, outside temperature, quantity of water heated, and other factors. However, if thermostatic controls are used, use per winter season probably will not exceed 100 kw.-hr. per warmer on the average, because of the short periods in which the warmer is actually heating the water.

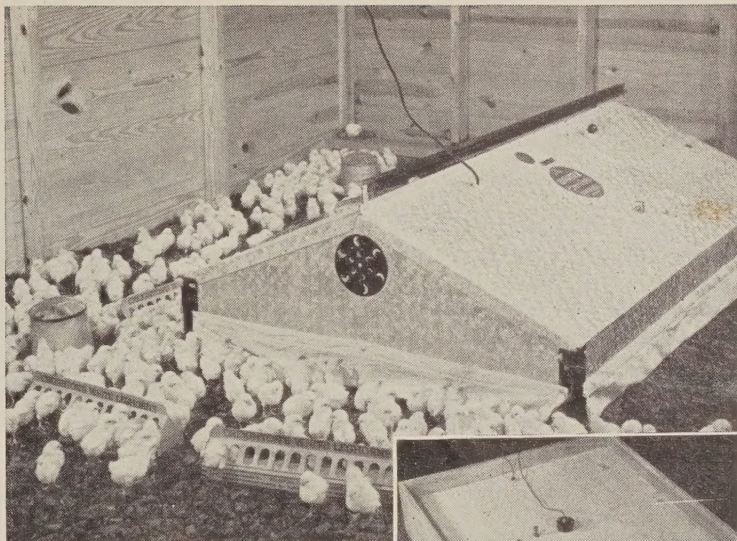
Ventilation. Electrically-powered fans serve three main purposes in poultry houses—to regulate temperature, bring in fresh air, and remove moisture.

They help to keep temperature uniform in battery-type brooder houses and other poultry houses. Fans may be of several types—built into the brooder unit itself, or installed in the wall of the brooder house in such a way as to pull air into the house, and thus provide circulation. Fans for cooling purposes, on the other hand, are installed so as to remove warm air from the house and to circulate air as needed.

Ventilating units may be used in conjunction with heating units, to circulate warmed air in the poultry house and provide an even temperature throughout. They also help to dry off condensed moisture in concrete-floored houses in northern climates.

Cost of ventilating equipment depends upon many factors, including size of fan, number of birds or chicks served, and length of operation of fan.

Brooders. Electric brooders are of manufactured and home-made types, from 50- to 500-chick capacity. Their chief value is their safety and reliability of heat supply at low cost.



Electric brooding greatly reduces fire hazards and chick losses, whether brooder used is manufactured or home-made.

Manufactured brooders sometimes incorporate air-conditioning features into metal hovers. Both types may use thermostatic controls, with heating elements, but REA has placed considerable emphasis on lamp-type brooders because of their simple construction.

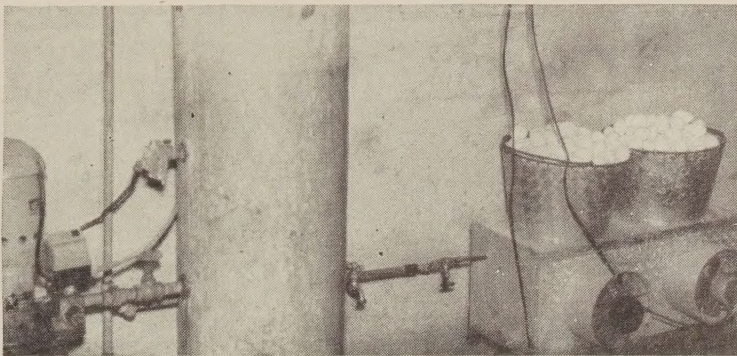
Electric brooders, even with low outside temperatures, provide assurance of steady, even heat requiring little attention. Best results are obtained in unheated brooder houses.

Lamp-type brooders use from $\frac{1}{2}$ to $1\frac{1}{2}$ kw.-hr. per chick over a 6-week season—heating elements use about $\frac{1}{2}$ to 2 kw.-hr.

Coolers. Eggs are highly perishable. They must be cooled quickly after gathering, and kept cool until marketing, to maintain quality. An electrically powered fan circulating cooled air through baskets or other containers of eggs provides this rapid cooling action, maintaining quality and preventing deterioration.

A household fan for this purpose uses only about 1 kw.-hr. of power a day.

Egg Tester—Egg Grader. A properly focused electric lamp provides a steady and efficient source of light for egg candling. A machine which automatically grades eggs for weight, lifting them from one cup to another until the proper balance is obtained, is an ingenious device of special value to large egg producers.

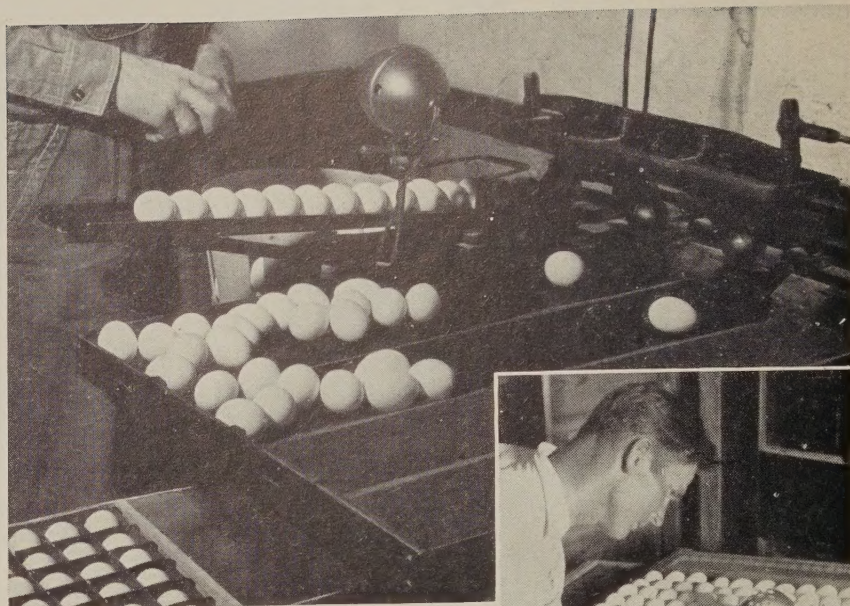


Electric fan cooler will maintain quality.

An electric candler uses about $\frac{1}{10}$ kw.-hr. of power per hour.

An electric grader uses about $\frac{1}{20}$ kw.-hr. per hour.

Chicken Picker. Another electric device of great value to commercial poultrymen is a mechanical picker. This revolving drum has rubber fingers which take the feathers off a bird in about a minute on the average, eliminating many hours of picking by hand. This device removes all body feathers, except the heavier wing and tail feathers. Small pickers use about $\frac{1}{2}$ kw.-hr. of power per hour.



This farmer finds his portable electric egg candler speeds up the job; helps eliminate faulty candling.

Brush powered by portable motor (left) can clean incubator trays or eggs.



Debeaker. Cannibalism is a source of considerable loss to many producers. An electric debeaker machine snips enough off the beak to prevent picking, and an electric element sears the cut to prevent bleeding. Debeaking also prevents feed waste because it tends to keep the bird from throwing mash out of the hopper.

Power costs are very small, compared with value received. About 1 kw.-hr. of power or less is required

to debeak 200 birds. Feed savings of 20 percent and complete elimination of cannibalism have been reported.

Fly Trap. An electric screen or trap, harmless to humans and animals, increases sanitation in the poultry house by reducing the number of flies. From $\frac{1}{5}$ to $\frac{1}{3}$ kw.-hr. per day is used by this device.

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